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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/592,486
Filing Date: June 08, 2000
Appellant(s): LOWERY ET AL.

Charles S. Fish
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed October 26, 2006 appealing from the Office action mailed June 24, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,023,722	**Colyer**	**2-2000**
6,445,680	**Moyal**	**9-2002**
6,578,073	**Starnes et al.**	**6-2003**
5,852,812	**Reeder**	**12-1998**
6,304,913	**Rune**	**10-2001**

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 6-8, 11-13, 15-23, 30-33, 35, 37-44 rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,023,722 issued to Colyer in view of USPN 6,445,680 issued to Moyal.

Regarding claim 1, Colyer teaches a method for data processing comprising:

receiving a data request at a data center, the request received from a client computer requesting data (figures 1: 31 and 3: step 301; col. 6, lines 26-28);

determining a state associated with the request to send data to the client computer (figure 3; col. 2, lines 33-59, i.e. the server performing action specific to the request);

assigning a priority to the state request according to a state associated with the request and according to priority criteria associated with the state (figure 3: 312; col. 6, line 64 to col. 7, line 18);

automatically adjusting the priority criteria (col. 6, line 64 to col. 7, line 18);

queuing the request as a function of the priority associated with the request (figures 1 and 2, and 3); and

retrieving the requested data from an origin server (col. 6, lines 45-53).

However, Colyer fails to teach dynamically updating the priority of the request to send data to the client computer in response to the adjusted priority criteria. Moyal teaches dynamically updating a priority queue of a requested to send data to a client computer in response to an adjusted priority criteria (figure 2B, col. 3, lines 30-40). At the time the invention was made, one of ordinary skill in the art would have been motivated to dynamically update a priority queue in response to a change of a state in order to process the queue with highest priority quickly, thus maximizing the data processing efficiency.

Regarding claim 6, Colyer teaches the method for data processing according to claim 1 further comprising communicating alternate content to the client computer requesting data to alternate content comprising a status page, the status page comprising an automatic re-submission time for re-issuing the request (col. 2, lines 33-59; col. 3, lines 31-48).

Regarding claim 7, Colyer teaches the method for data processing according to claim 6, wherein the alternate content comprises the status page and wherein the status page is communicated when the load at the origin server exceeds a predetermined threshold (col. 3, lines 31-48; col. 7, lines 19-31).

Regarding claim 8, Colyer teaches the method for data processing according to claim 6, wherein communicating the alternate content comprises:

associating a queue delay time with the request (figures 1-3; col. 3, lines 3-7, lines 50-58);

determining whether the queue delay time exceeds a threshold (col. 3, lines 3-7, lines 50-58);

generating the alternate content as a function of predetermined criteria associated with the origin server when the queue delay time exceeds the threshold (col. 3, lines 31-48; col. 7, lines 19-31); and

returning the alternate content to the client computer (col. 3, lines 31-48; col. 7, lines 19-31).

Regarding claim 11, Colyer teaches the method for data processing according to claim 8, wherein generating the alternate content further comprises generating the alternate based on the queue delay time and the predetermined criteria (col. 3, lines 31-48; col. 7, lines 19-31).

Regarding claim 12, Colyer teaches the method for data processing according to claim 8, wherein the predetermined criteria comprises information associated with the request (col. 3, lines 31-48; col. 7, lines 19-31).

Regarding claim 13, Colyer teaches the method for data processing according to claim 8, wherein the predetermined criteria comprises external information associated with a user associated with the request (col. 3, lines 31-48; col. 7, lines 19-31).

Regarding claim 15, Colyer teaches the method for data processing according to claim 6, wherein the alternate content comprises the status page and further including resubmitting the data request to the data center by a browser to update the status page (col. 3, lines 30-45).

Regarding claim 16, Colyer teaches the method for data processing according to claim 15, wherein the resubmitting the data request is performed automatically by the browser (col. 6, lines 26-44).

Regarding claim 17, Coyler teaches the method for data processing according to claim 1 wherein assigning the priority to the request comprises determining whether the request is prioritizable, and wherein the priority is a first priority when the request is non-prioritizable and wherein the priority is a second priority when the request is prioritizable (col. 7, lines 1-18).

Regarding claim 18, Coyler teaches the method for data processing according to claim 17, wherein the first priority is a default priority and wherein the second priority is determined as a function of the data requested by the data request (col. 7, lines 1-18).

Regarding claim 19, Coyler teaches the method for data processing according to claim 1 further comprising determining the load on an origin server by comparing a load metric associated with the origin server to a predetermined threshold (col. 7, lines 19-30).

Regarding claim 20, Coyler teaches the method for data processing according to claim 19, wherein the load metric comprises the number of requests being handled by the origin server (col. 7, lines 19-30).

Regarding claim 21, Coyler teaches the method for data processing according to claim 19, wherein the load metric comprises the number of network connections being supported by the origin server (col. 7, lines 19-39).

Regarding claim 22, Coyler teaches the method for data processing according to claim 19, wherein the load metric comprises the delay associated with retrieving a predetermined web page from the origin server (col. 2, lines 33-59).

Regarding claim 23, Coyler teaches the method for data processing according to claim 1, wherein the requests is first request and wherein queuing the request comprises:

storing the first request in a queue associated with the data center, the queue having therein a plurality of second requests distinct from the first request, each of the second requests having a respective priority associated therewith (figures 1 and 2);

sorting the queue as a function of the respective priority associated with the first request and each of the second requests (col. 7, lines 1-18); and

wherein retrieving the requested data comprises: processing the highest priority request in the queue by the origin server (col. 7, lines 1-18).

Claim 30 is similar to claim 1 therefore is rejected under the same rationale.

Regarding claim 31, Colyer teaches the method for dynamic flow control according to claim 30 further comprising determining a load at the protected resource, and wherein associating a priority with the data request comprises associating the priority with the data request when the load at the protected resource exceeds a predetermined threshold and wherein queuing the data request comprises queuing the data request when the load at the protected resource exceeds the predetermined threshold (col. 3, lines 30-58; col. 6, line 64 – col. 7, line 30).

Regarding claim 32, Colyer teaches the method for dynamic flow control according to claim 31 further comprising indicating status information to be returned to the client computer requesting data (col. 3, lines 31-48).

Regarding claim 33, Colyer teaches the method for dynamic flow control according to claim 31 further comprising indicating alternate content to be returned to the client computer requesting data (col. 3, lines 31-48).

Regarding claim 35, Colyer teaches the method for dynamic flow control according to claim 32, wherein the status information comprises a status web page and wherein indicating status information comprises selecting the status page based on priority criteria associated with the protected resource (col. 3, lines 30-45).

Regarding claim 36, Colyer teaches the method for dynamic flow control according to claim 35, further comprising resubmitting the data request after a predetermine time interval to the flow control server (col. 3, lines 30-45).

Regarding claim 37, Colyer teaches the method for dynamic flow control according to claim 36, wherein resubmitting the data request is performed automatically (col. 6, lines 26-44).

Regarding claim 38, Colyer teaches the method for dynamic flow control according to claim 35 further comprising delaying communication of the status page indication for a predetermined time interval based on the priority criteria (figures 1-3; col. 3, lines 3-7, lines 50-58).

Regarding claim 39, Colyer teaches the method for dynamic flow control according to claim 38, wherein delaying communication of the status page comprises delaying communication of the status page indication based on an expected delay associated with the protected resource (figures 1-3; col. 3, lines 3-7, lines 50-58)

Regarding claim 40, Colyer teaches the method for dynamic flow control according to claim 31, wherein receiving the data request comprises receiving the data request from a flow controlled device (figure 1).

Regarding claim 41, Colyer teaches the method for dynamic flow control according to claim 31, wherein retrieving the data requested by the data request comprises:

removing at least one prioritized data request from the queue when the load at the protected resource is below the predetermined threshold (col. 3, lines 33-45; col. 7, lines 19-31);

communicating the prioritized data requests to the protected resource (figures 2 and 3) ;

retrieving the requested data from the protected resource (col. 6, lines 45-53); and

communicating the requested data to a flow controlled device associated with the data request (figures 1-3).

Regarding claim 42, Colyer teaches the method for dynamic flow control according to claim 41, wherein removing at least one prioritized data request comprises removing the highest priority data request (col. 3, lines 33-45; col. 7, lines 19-31).

Regarding claim 43, the method for dynamic flow control according to claim 41, wherein associating the priority wit the request comprises determining whether the request is prioritizable, and wherein the priority is a first priority when the request is non-prioritizable and wherein the priority is a second priority when the request is prioritizable (col. 7, lines 1-18).

Regarding claim 44, the method for data processing accordant to claim 43, wherein the first is a default priority and wherein the second priority is determined as a function of the request (col. 7, lines 1-18).

Claims 2-4, 9-10, 25-28, 34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coyler in view of Moyal in further view of USPN 6,578,073 issued to Starnes et al (hereby Starnes).

Regarding claim 2, Coyler teaches the method for data processing according to claim 1, wherein the data center comprises a flow control server (figure 1, no. 31) and a web server (figure 1, no. 3). However, Colyer fails to teach the data center comprising a cache server. Starnes teaches a data center comprising a cache server (figure 2, no. 208; abstract; co. 6, lines 30-40). At the time the invention was made, one of ordinary skill in the art would have been motivated to comprise a cache server in order to provide storage for content that was previously requested, thus provides rapid access to the data and improving the data processing efficiency.

Regarding claim 3, Colyer teaches the method for data processing according to claim 1 further comprising: determining a load associated with the origin server (col. 3, lines 33-45); and granting and denying permission from the flow control server to retrieve data when the load associated with the origin server is above or below a threshold (col. 3, lines 33-45; col. 7, lines 19-31). However, Coyler does not teach: controlling at a flow control server retrieval of data from the origin server by a cache server; granting permission from the flow control server to the

cache server to retrieve data when the load associated with the origin server is below a threshold; and denying permission from the flow control server to the cache server to retrieve data when the load associated with the origin server is above the threshold.

Starnes teaches: controlling at a flow control server retrieval of data from the origin server by a cache server (figures 1 and 2); granting permission from the flow control server to the cache server to retrieve data when the load associated with the origin server is below a threshold (figures 3A and 3B; col. 9, lines 6-13); and denying permission from the flow control server to the cache server to retrieve data when the load associated with the origin server is above the threshold (figures 3A and 3B; col. 9, lines 6-13). At the time the invention was made, one of ordinary skill in the art would have been motivated to combine the teaching of Starnes with the teaching of Colyer in order to provide rapid access to the data, thus improving the data processing efficiency.

Regarding claim 4, Colyer teaches the method for data processing according to claim 3, wherein the threshold is determined as a function of the load of the origin server (col. 3, lines 33-45; col. 7, lines 19-31).

Regarding claim 9, Colyer teaches the method for data processing according to claim 8, wherein the requested is generated at a client computer remote from the data center (figure 1). However, Colyer fails to teach generating the alternate content comprising selecting the alternate content as a function of the bandwidth available to the client computer. Starnes teaches generating the alternate content comprising selecting the alternate content as a function of the

bandwidth available to the client computer (col. 4, lines 20-30). At the time the invention was made, one of ordinary skill in the art would have been motivated to select the alternate content as a function of the bandwidth available to the client computer in order to provide rapid access to the data, thus improving the data processing efficiency.

Regarding claim 10, Colyer fails to teach the method for data processing according to claim 9, wherein generating the alternate content further comprises determining the amount of bandwidth available to the client computer, wherein the amount of bandwidth comprises one of high-bandwidth, medium-bandwidth and low-bandwidth. Starnes teaches generating the alternate content further comprising determining the amount of bandwidth available to the client computer, wherein the amount of bandwidth comprises one of high-bandwidth, medium-bandwidth and low-bandwidth (col. 4, lines 20-30). At the time the invention was made, one of ordinary skill in the art would have been motivated to combine the teaching of Starnes with the teaching of Colyer in order to provide rapid access to the data, thus improving the data processing efficiency.

Regarding claim 25, Colyer teaches a system for dynamic flow control comprising:

receiving a request for content and retrieve content from an origin server in response thereto, the request received from a client computer requesting the content (figures 1 and 3); and

a flow control server having an associated queue and coupled to the cache server, the flow control server operable to:

determining a state associated with the request to send data to the client computer (figures 1 and 3);

assign a priority to the request according to the state associated with the request and according to priority criteria associated with the state (figure 2; col. 6, line 64 to col. 7, line 18);

automatically adjusting the priority criteria (col. 6, line 64 to col. 7, line 18);

store the prioritized request in the queue as a function of the priority associated with the request (figures 1 and 2, and 3); and

regulate the retrieval of content from the origin server (col. 6, lines 45-53).

However, Colyer fails to expressly teach the dynamic flow control comprising a cache server operable to receive a request for content and retrieve content from an origin server in response thereto; and the flow control server operable to regulate the retrieval of content from the origin server by the cache server.

Starnes teaches the dynamic flow control comprising a cache server operable to receive a request for content and retrieve content from an origin server in response thereto (figure 1); and the flow control server being operable to regulate the retrieval of content from the origin server by the cache server (figure 2).

Colyer and Starnes fail teach dynamically updating the priority in response to a change of the state. Moyal teaches dynamically updating a priority queue in response to a change of a state (figure 2B, col. 3, lines 30-40).

At the time the invention was made, one of ordinary skill in the art would have been motivated to combine the teaching of Starnes with the teaching of Colyer and Moyal in order to provide rapid access to the data, thus improving the data processing efficiency.

Regarding claim 26, Colyer fails to teach the system for dynamic flow control according to claim 25, wherein the cache server is further operable to request permission from the flow control server to retrieve content from the origin server. Starnes teaches the cache server being operable to request permission from the flow control server to retrieve content from the origin server (figures 3A and 3B; col. 9, lines 6-13). At the time the invention was made, one of ordinary skill in the art would have been motivated to combine the teaching of Starnes with the teaching of Colyer in order to provide rapid access to the data, thus improving the data processing efficiency.

Regarding claim 27, Colyer teaches the system for dynamic flow control according to claim 25, wherein the flow control sever is further operable to associate a priority with the request based on the content requested by the request and determine a processing load associated with the origin server (figure 2; col. 6, line 64 to col. 7, line 18).

Regarding claim 28, Colyer teaches the system for dynamic flow control according to claim 25, wherein the flow control server is further operable to associate a priority with the request based on external information associated with the request (figure 2; col. 6, line 64 to col. 7, line 18).

Regarding claim 34, Colyer fails to teach the dynamic flow control according to claim 33, further comprising determining the alternate content as a function of the bandwidth associated with the client computer. Starnes teaches generating the alternate content comprising selecting

the alternate content as a function of the bandwidth available to the client computer (col. 4, lines 20-30). At the time the invention was made, one of ordinary skill in the art would have been motivated to select the alternate content as a function of the bandwidth available to the client computer in order to provide rapid access to the data, thus improving the data processing efficiency.

Claims 14 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colyer in view of Moyal, in further view of USPN 5,582,812 issued to Reeder.

Regarding claims 14 and 29, Colyer and Moyal fail to teach the method for data processing according to claim 13, wherein the external information comprises historical shopping information associated with the user associated with the request. Reeder teaches the external information comprising historical shopping information associated with the user associated with the request (col. 15, lines 14-23). At the time the invention was made, one of ordinary skill in the art would have been motivated to combine the teaching of Reed with the teachings of Colyer and Moyal in order to provide rapid access to billing information data, thus improving customer service.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Colyer in view of Moyal, in further view of USPN 6,304,913 issued to Rune.

Regarding claim 24, Colyer fails to teach the method for data processing according to claim 1, wherein the data center comprises a plurality of data centers and wherein receiving the request comprises: determining a network distance between the client computer and at least one of the data centers; determining the closest data center to the client computer; resolving a destination address associated with the request to the closest data center; and routing the request to the closet data center.

Rune teaches determining a network distance between a client computer and at least one of the data centers (Abstract); determining the closest data center to the client computer (Abstract); resolving a destination address associated with the request to the closest data center (Abstract); and routing the request to the closet data center (Abstract). At the time the invention was made, one of ordinary skill in the art would have been motivated to combine the teaching of Rune with the teaching of Colyer in order to allow requests to be sent to the closest data center, thus improving the response time.

(10) Response to Argument

Appellant's arguments have been fully considered but they are not persuasive.

Appellant argues that the Colyer-Moyal combination fails to teach "dynamically updating the priority of the request to send data to the client computer in response to the adjusted priority criteria" as claimed in the independent claims. The Patent Office respectfully disagrees. As cited above, figures 2 and 3; col. 6, line 64 to col. 7, line 18 of Colyer teaches assigning a priority to a request that are stored in a queue (interpreted as state). The priority is based on criteria such as textual information or graphical data. The priority is given to whichever takes less time to

process, therefore the criteria is automatically adjusted. Moyal teaches dynamically updating a priority queue of a requested to send data to a client computer (figure 2B, col. 3, lines 30-40). For the reason above, the Colyer-Moyal combination does teach the claimed limitation.

In response to appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In response to appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Regarding the dependent claims, Appellant has not argued any additional feature that would distinguish them from the prior art. Therefore, they are being rejected as being dependent on rejected independent claims.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

ANB

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